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Message: Enclosed herewith: <ul style="list-style-type: none">• Transmittal Document; and• Appeal Brief.	
Re: Application No. 09/478,309 Attorney Docket No: AUS990809US1	
Date: Tuesday, February 01, 2005	
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Gordon et al.**Serial No.: **09/478,309**Filed: **January 6, 2000**For: **Method and Apparatus for
Securing a Cookie Cache in a Data
Processing System****35525**PATENT TRADEMARK OFFICE
CUSTOMER NUMBER§
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§Group Art Unit: **2135**Examiner: **Klimach, Paula W.**Attorney Docket No.: **AUS990809US1****RECEIVED**
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By:

Carrie Parker
Carrie ParkerTRANSMITTAL DOCUMENTCommissioner for Patents
P.O. Box 1450
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Sir:

ENCLOSED HEREWITH:

- Appeal Brief (37 C.F.R. 41.37).

A fee of \$500.00 is required for filing an Appeal Brief. Please charge this fee to IBM Corporation Deposit Account No. 09-0447. No additional fees are believed to be necessary. If, however, any additional fees are required, I authorize the Commissioner to charge these fees which may be required to IBM Corporation Deposit Account No. 09-0447. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to IBM Corporation Deposit Account No. 09-0447.

Respectfully submitted,

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Docket No. AUS990809US1

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Gordon et al.

Serial No. 09/478,309

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For: Method and Apparatus for
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Group Art Unit: 2135

Examiner: Klimach, Paula W.

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By:


Carrie Parker

APPEAL BRIEF (37 C.F.R. 41.37)

This brief is in furtherance of the Notice of Appeal, filed in this case on December 1, 2004.

The fees required under § 41.20(B)(2), and any required petition for extension of time for filing this brief and fees therefore, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

(Appeal Brief Page 1 of 23)
Gordon et al. - 09/478,309

REAL PARTY IN INTEREST

The real party in interest in this appeal is the following party: International Business Machines Corporation (IBM), having a place of business at Armonk, New York 10504.

RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal, there are no such appeals or interferences.

STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are: 1-38

B. STATUS OF ALL THE CLAIMS IN APPLICATION

1. Claims canceled: 10-16, 30-36, and 38
2. Claims withdrawn from consideration but not canceled: NONE
3. Claims pending: 1-9, 17-29, and 37
4. Claims allowed: NONE
5. Claims rejected: 1-9, 17-29, and 37

C. CLAIMS ON APPEAL

The claims on appeal are: 1-9, 17-29, and 37

STATUS OF AMENDMENTS

No amendments have been submitted since the final office action was issued.

SUMMARY OF CLAIMED SUBJECT MATTER

A. CLAIM 1 - INDEPENDENT

The subject matter of claim 1 is directed to a method for providing access to resources within a data processing system. The first part of the method is shown in **Figure 5**, which is discussed in the application from page 13, line 14 through page 14, line 6; the second part of the method is shown in **Figure 6**, which is discussed in the application on page 14, lines 7-20. The method comprises the data processing system implemented steps of:

- receiving a request from a requestor to access a resource in the data processing system, shown as step 500 in **Figure 5** and discussed on page 13, lines 16-18;
- sending a first cookie to the requestor in response to the request, wherein the cookie is used to access the resource, shown as steps 502, 504 of **Figure 5**, discussed on page 13, line 19 through page 14, line 3;
- storing an identification of the requestor and the first cookie to form a stored identification and a stored cookie, wherein the identification of the requestor identifies a particular data processing system from which the request originated, shown as step 506 of **Figure 5**, discussed on page 14, lines 3-6;
- responsive to receiving a second cookie from a source, comparing an identification of the source and the second cookie with the stored identification and the stored cookie to determine whether the second cookie contains the same information as the first cookie and whether the second cookie was received from the particular data processing system, shown as steps 600, 602 in **Figure 6** and discussed on page 14, lines 10-13; and
- responsive to a match between the identification of the source and the second cookie and the stored identification and the stored cookie, allowing access to the resource, shown as steps 604, 606 in **Figure 6**, discussed on page 14, lines 13-18 and page 4, lines 15-18.

B. CLAIM 17 - INDEPENDENT

The subject matter of claim 17 is directed to a data processing system, shown in **Figures 1 and 2**, which are discussed in the application from page 6, line 4 through page 9, lines 29. The data processing system comprises a cache and a cookie management process. The cookie cache is shown in **Figure 4**, discussed in the application on page 12, line 21 through page 13, line 13. The cookie management process is a device claim corresponding to independent method claim 1.

C. CLAIM 21 - INDEPENDENT

The subject matter of claim 21 is directed to a data processing system. This claim is a means plus function claim corresponding to independent method claim 1.

D. CLAIM 37 - INDEPENDENT

The subject matter of claim 37 is directed to a computer program product and corresponds to independent claim 1.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL**A. GROUND OF REJECTION 1 (Claims 1-9, 17-29, and 37)**

Claims 1-9, 17-29, and 37 stand rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent 6,205,480 B1 to Broadhurst *et al.*, hereinafter Broadhurst.

B. GROUND OF REJECTION 2 (Claim 18)

Claim 18 stands rejected under 35 U.S.C § 103(a) as obvious over Broadhurst and Grantges, Jr. *et al.*, hereinafter Grantges.

ARGUMENT

A. GROUND OF REJECTION 1 (Claims 1-9, 17-29, and 37)

Representative claim 1 recites,

1. A method in a data processing system for providing access to resources within the data processing system, the method comprising the data processing system implemented steps of:
 - receiving a request from a requestor to access a resource in the data processing system;
 - sending a first cookie to the requestor in response to the request, wherein the cookie is used to access the resource;
 - storing an identification of the requestor and the first cookie to form a stored identification and a stored cookie, wherein the identification of the requestor identifies a particular data processing system from which the request originated;
 - responsive to receiving a second cookie from a source, comparing an identification of the source and the second cookie with the stored identification and the stored cookie to determine whether the second cookie contains the same information as the first cookie and whether the second cookie was received from the particular data processing system; and
 - responsive to a match between the identification of the source and the second cookie and the stored identification and the stored cookie, allowing access to the resource.

Concerning this claim and related claims, the final office action states,

In reference to claims 1, 21, and 37, Broadhurst discloses a system, method, and computer program product for processing data for providing access to resources within the data processing system (abstract), the method comprising the data processing system implemented steps of:

Receiving a request from a requestor to access a resource in the data processing system (Fig.2 part 100).

The system is responsive to receiving a second cookie from a source, comparing an identification of the source and the second cookie with the stored identification and the credentials to determine whether the second cookie contains the same information as the first cookie and whether the second cookie was received from the particular data processing system, and responsive to a match between the identification of the source and the second cookie and stored identification and the stored cookie, allowing access to the resource (Fig. 2, part 112 and 114 in combination with column 4 lines 42-60). The system allows access depending on the authentication information therefore responsive to a match between the identification of the source and the second

cookie and the stored identification and the stored credentials.

Although Broadhurst does not expressly disclose storing the cookie, Broadhurst discusses storing the credentials that can be formed into a cookie (column 3, lines 41-48). The user's identity is used to form a network credential (column 4 lines 20-25).¹

It is submitted that there are two main problems with this rejection: (1) Broadhurst does not disclose storing and comparing both an identification of the requestor and an associated cookie; and (2) Broadhurst does not provide a motivation to modify this patent to store the cookie and identifier and to compare these to a received request in order to meet the claimed invention.

(1) Broadhurst does not store and compare both an identification and a cookie

Regarding an obviousness rejection, the Federal Circuit has noted the following,

All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994).

In a proper obviousness determination, regardless of whether the changes from the prior art are "minor," the changes must be evaluated in terms of the whole invention, including whether the prior art provides any teaching or suggestion to one of ordinary skill in the art to make the changes that would produce the claimed invention. *In re Chu*, 66 F.3d 292, 298, 36 U.S.P.Q.2d 1089, 1094 (Fed. Cir. 1995).

It is submitted that Broadhurst does not store a copy of the cookie that is sent out; further this patent does not show saving the identification of the system to which a cookie is sent. It is noted that the drawings of Broadhurst are reproduced on the following page, while the cited sections of Broadhurst are reproduced here,

For each user, the directory 16 stores information which allows the user's authentication information to be mapped into a network credential which includes a role of the user. The network credential can then be formed into a cookie. Once logged in and initially authenticated to the network, a user may freely access any of the applications allowed by the role.²

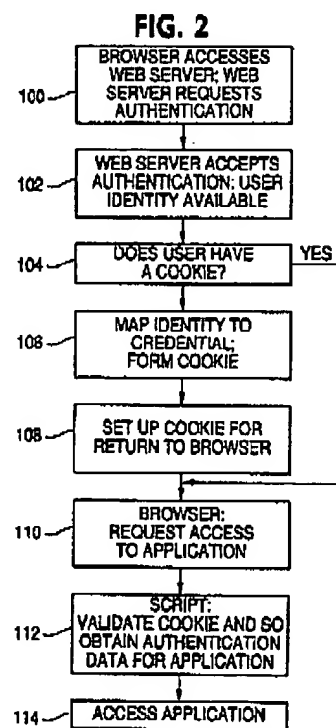
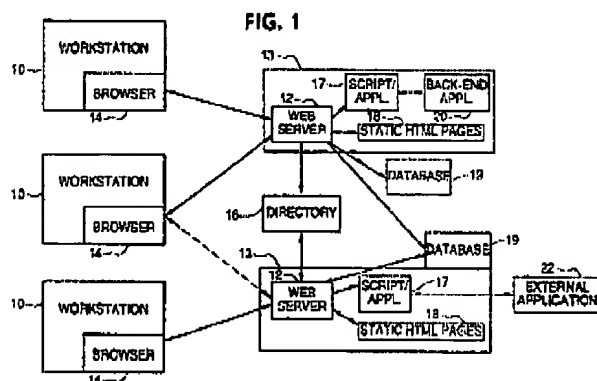
In step 104, it is determined whether the user already has a cookie containing a network credential. If there is not yet a user cookie, one is created in step 106 by consulting the directory 16 to map the user's identity to an intermediate identity and a user role, which are used to form a network credential.³

¹ Final office action of 10/21/04, page 3

² Broadhurst, column 3, lines 41-48

³ Broadhurst, column 4, lines 20-25

In step 110, the user attempts access to a new application (a back-end application resident on the same host machine as the web server or an external application not resident on the same host machine as the web server) by inputting a request to the browser, which then attempts to access the requested resources. These additional resources may or may not be accessible to the user based on the user's assigned role. In step 112, the browser obtains authentication information, in the form of SV values necessary to access the back-end or external application, by accessing a script for single sign on stored with the web server, and transferring the cookie to the script. The script retrieves the script access variable for the back-end or external application based on the network credential (including the user role), and presents the SV values to the new application. Step 112 is performed automatically by the browser without any action required on the part of the user beyond presenting the request in step 108. In step 114, the desired application grants access based on the authentication information obtained in step 112.⁴



As seen in the excerpts on the prior page and in **Figure 2** here, Broadhurst creates a cookie from the user's identity, which is then given to the user. When the user requests access to a resource (application), the possession of a valid cookie provides all the information that is needed to gain access and the user is allowed to proceed. There is no need presented in Broadhurst to require more. Nor does Broadhurst appear to save this information, since the user has a copy to present to the

⁴ Broadhurst, column 4, lines 40-60

server as needed.

In the instant application, the process does not stop with validation of the cookie, as the following excerpt attests, noting,

the secure cookie cache of the present invention also may prevent the use of a cookie by any other system other than the intended remote host. For example, if a cookie is intercepted by network "ease [sic] dropper" system it would be invalid for any system except for the specific remote host to which the cookie was issued. Thus, the cookie matches, but the IP address does not match, the cookie is not accepted in these examples.

Thus, the instant application requires that not only must the cookie be valid; it must also be presented by the system to which the cookie was sent. This is shown in the claims by the steps of "storing an identification of the requestor and the first cookie to form a stored identification and a stored cookie ... comparing an identification of the source and the second cookie with the stored identification and the stored cookie to determine whether the second cookie contains the same information as the first cookie and whether the second cookie was received from the particular data processing system".

It is submitted that neither the cited portions of Broadhurst nor the rest of the patent save a system identifier and an associated cookie, then compare both the cookie and system identifier with a requesting system and cookie. It is further submitted that this distinction is patentable, as it provides additional security that is not possible in the prior art. The Board of Appeals is requested to overturn the rejection of the claims represented by claim 1.

(2) Broadhurst does not provide a motivation to modify

Regarding motivation in an obviousness rejection, the Federal Circuit notes,

The mere fact that the prior art could be readily modified to arrive at the claimed invention does not render the claimed invention obvious; the prior art must suggest the desirability of such a modification. *In re Ochiai*, 71 F.3d 1565, 1570, 37 U.S.P.Q.2d 1127, 1131 (Fed. Cir. 1996); *In re Gordon*, 733 F.2d 900, 903, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). Merely stating that the modification would have been obvious to one of ordinary skill without identifying an incentive or motivation for making the proposed modification is insufficient to establish a *prima facie* case.

It is submitted that the final rejection does not even appear to recognize that Broadhurst requires only a valid cookie for validation, while the instant application requires that the cookie be both valid and presented by the system that was previously given the cookie. Broadhurst does not appear to mention the possibility that an external system could attempt to intercept a cookie and use

it to attack or gain information from the issuing computer system. In fact, Broadhurst notes, in one of the excerpts cited in the rejection, that "The present invention is particularly advantageous in an intranet environment."⁵ It is noted that when working in an intranet, one is protected by firewalls from the malicious mischief present on the Internet; thus an application on an intranet would not need the added protection supplied by the instant application when saving and comparing both cookies and the system to which the cookies were sent. It is submitted that Broadhurst does not present any of the situations that would necessitate further protection. This patent does not appear to discuss the possible malicious use of cookies and appears perfectly content with the measures it has in place for security.

Thus, Broadhurst does not provide any incentive or motivation to modify this patent to meet the claimed limitations. The Board of Appeals is requested to overturn the present rejection.

B. GROUND OF REJECTION 2 (Claim 18)

Claim 18 is rejected over the combination of Broadhurst and Grantges. This claim is dependent on claim 17, which has been shown to be allowable above. Thus this claim is allowable simply for being dependent on an allowable claim. However, claim 18 recites further limitations that are not met by Grantges. Specifically, claim 18 recites,

18. The data processing system of claim 17, wherein the requestor is a server.

Regarding this claim, the rejection states,

Grantges discloses a system that uses authentication cookies wherein the cookies are redirected by a server to the correct server therefore making the server the requestor on behalf of the web browser (column 11 line 63 to column 12 line 10).

The cited section of Grantges reads,

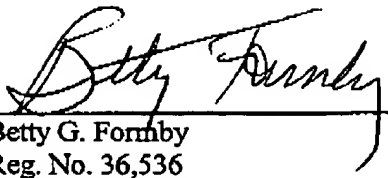
In step 124, the incoming message is routed by gateway proxy server 40 to the particular destination server 28.sub.1, 28.sub.2, . . . , 28.sub.3 corresponding to the selected application. Gateway proxy server 40 includes a mapping or routing function responsive to the appended identifier 100, and configured to identify the appropriate destination server 28. Identifier 100 may be omitted from the message that is eventually routed through one of connections 58, 60, and 62, since its purpose (i.e., routing) has already been satisfied. It is important to note that the selected-application cookie 94 now contains the information as to the selected application. Thus, subsequent messages, which include cookie 94, may be routed to the appropriate destination server. The method then proceeds to step 116, wherein the method ends.

⁵ Broadhurst, column 2, lines 47-48, in Summary of the Invention

It is submitted that while the cited section of Grantges does show a gateway proxy server redirecting a message to a destination server, one of ordinary skill in the art would not interpret this as the proxy server becoming the "requestor", as the rejection suggests. Rather, the requestor would remain the entity that originated the request – in the case of Grantges, the browser.

It is further submitted that a cookie is generally considered to be information that a server creates and gives to a browser. When the browser requests additional pages, the browser also presents the cookie to the server. In contrast, the instant application modifies this usual understanding, so that a cookie is given to a server, rather than to a browser. Thus, to have the requestor, who is required to present a cookie, be a server departs from the usual procedures. It is submitted that Grantges does not show this departure from the usual, but merely shows a proxy server forwarding messages. Thus, it is submitted that Grantges would not be seen as disclosing that the requestor is a server, as this would be understood by one of ordinary skill in the art. The Board of Appeals is therefore requested to overturn the rejection of claim 18.

The Board of Appeals is requested to overturn the rejections of claims 1-9, 17-29, and 37 and to allow this application to issue.



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CLAIMS APPENDIX

The text of the claims involved in the appeal are:

1. A method in a data processing system for providing access to resources within the data processing system, the method comprising the data processing system implemented steps of:

receiving a request from a requestor to access a resource in the data processing system;

sending a first cookie to the requestor in response to the request, wherein the cookie is used to access the resource;

storing an identification of the requestor and the first cookie to form a stored identification and a stored cookie, wherein the identification of the requestor identifies a particular data processing system from which the request originated;

responsive to receiving a second cookie from a source, comparing an identification of the source and the second cookie with the stored identification and the stored cookie to determine whether the second cookie contains the same information as the first cookie and whether the second cookie was received from the particular data processing system; and

responsive to a match between the identification of the source and the second cookie and the stored identification and the stored cookie, allowing access to the resource.
2. The method of claim 1, wherein access to the resource is allowed by accepting the second cookie.

3. The method of claim 1 further comprising:
responsive to an absence of a match between the identification of the source and the second cookie and the stored identification and the stored cookie, rejecting the second cookie.
4. The method of claim 1, wherein the resource is a file and the first cookie identifies disk location of the file.
5. The method of claim 1, wherein the source is a web server.
6. The method of claim 1, wherein the step of storing an identification of the source and the first cookie to form a stored identification and a stored cookie comprises:
storing the identification of the source and the first cookie in a cache.
7. The method of claim 6, wherein the identification is an Internet protocol address.
8. The method of claim 1, wherein the steps of receiving, sending, storing, comparing, and allowing are performed in a browser.
9. The method of claim 1, wherein the resource is a file having a path and further comprising:
generating a disk location number from the path; and
placing the disk location number into the first cookie.

17. A data processing system comprising:
- a cache;
- a cookie management process, wherein the cookie management process generates a cookie in response to receiving a request to access a resource within the data processing system from a requestor; sends the cookie to the requestor, stores the cookie and an identification of the requestor in the cache wherein the identification of the requestor identifies a particular data processing system from which the request originated; responsive to being presented a received cookie from a source, compares the cookie and the identification of the requestor to the received cookie and the source to determine whether the received cookie contains the same information as the cookie sent to the requestor and whether the received cookie was received from the particular data processing system; and allows access to the resource in response to a match between the cookie and the identification of the requestor with the received cookie and the source.
18. The data processing system of claim 17, wherein the requestor is a server.
19. The data processing system of claim 17, wherein the resource is a file.
20. The data processing system of claim 17, wherein the identification of the requestor and the identification of the source are Internet protocol addresses.
21. A data processing system for providing access to resources within the data processing system, the data processing system comprising:

receiving means for receiving a request from a requestor to access a resource in the data processing system;

sending means for sending a first cookie to the requestor, wherein the first cookie is used to access the resource;

storing means for storing an identification of the requestor and the first cookie to form a stored identification and a stored cookie, wherein the identification of the requestor identifies a particular data processing system from which the request originated;

comparing means, responsive to receiving a second cookie from a source, for comparing an identification of the source and the second cookie with the stored identification and the stored cookie to determine whether the second cookie contains the same information as the first cookie and whether the second cookie was received from the particular data processing system; and

allowing means, responsive to a match between the identification of the source and the second cookie and the stored identification and the stored cookie, for allowing access to the resource.

22. The data processing system of claim 21, wherein access to the resource is allowed by accepting the second cookie.

23. The data processing system of claim 21 further comprising:

rejecting means, responsive to an absence of a match between the identification of the source and the second cookie and the stored identification and the stored cookie, for rejecting the second cookie.

24. The data processing system of claim 21, wherein the resource is a file and the first cookie identifies disk location of the file.

25. The data processing system of claim 21, wherein the source is a web server.

26. The data processing system of claim 21, wherein the storing means for storing an identification of the source and the first cookie to form a stored identification and a stored cookie comprises:

storing means for storing the identification of the source and the first cookie in a cache.

27. The data processing system of claim 26, wherein the identification is an Internet protocol address.

28. The data processing system of claim 21, wherein the receiving means, sending means, storing means, comparing means, and allowing means are performed in a browser.

29. The data processing system of claim 21, wherein the resource is a file having a path and further comprising:

generating means for generating a disk location number from the path; and

placing means for placing the disk location number into the first cookie.

37. A computer program product in a computer readable medium for providing access to resources within the data processing system, the computer program product comprising:

first instructions for receiving a request from a requestor to access a resource in the data processing system;

second instructions for sending a first cookie to the requestor, wherein the first cookie is used to access the resource;

third instructions for storing an identification of the requestor and the first cookie to form a stored identification and a stored cookie, wherein the identification of the requestor identifies a particular data processing system from which the request originated;

fourth instructions, responsive to receiving a second cookie from a source, for comparing an identification of the source and the second cookie with the stored identification and the stored cookie to determine whether the second cookie contains the same information as the first cookie and whether the second cookie was received from the particular data processing system; and

fifth instructions, responsive to a match between the identification of the source and the second cookie and the stored identification and the stored cookie, for allowing access to the resource.

EVIDENCE APPENDIX

There is no evidence to be presented.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings.